

What is Claimed:

1 1. A content information acquisition method for allowing an agent information terminal to  
2 acquire same information as content information acquired from a Web server by a customer  
3 information terminal having a customer browser installed therein which displays the content  
4 information, comprising the steps of:

5 (a) interconnecting the agent information terminal with a collaboration server;

6 (b) generating a user access identifier for identifying the agent information terminal  
7 uniquely;

8 (c) acquiring, from the collaboration server, an agent applet for generating an agent  
9 control window through which personal information is input and which transmits personal  
10 information from the agent information terminal to the collaboration server;

11 (d) activating the agent applet to generate the agent control window;

12 (e) transmitting a log-on request including a user ID of an agent from the agent  
13 information terminal to the collaboration server in response to a log-on instruction operation  
14 by the agent;

15 (f) interconnecting the customer information terminal with the collaboration server;

16 (g) generating another user access identifier for identifying the customer

information terminal uniquely;

(h) acquiring, from the collaboration server, a first customer applet for generating a customer control window through which personal information is input and which transmits the personal information from the customer information terminal to the collaboration server;

(i) activating the first customer applet to generate the customer control window;

(j) transmitting a log-on request including personal information of the customer and query type information from the customer information terminal to the collaboration server in response to a log-on instruction operation by the customer;

(k) adding a record of the customer to a customer queue corresponding to the query type information;

(l) checking a waiting state of the record of the customer in the customer queue corresponding to the query type information;

(m) informing the customer information terminal of a checking result;

(n) assigning an agent corresponding to the query type information to the customer;

(o) informing the agent information terminal of a start of a session;

32 (p) informing the customer information terminal of the start of the session;

33 (q) embedding in the content information a second customer applet for checking  
34 a change in the content information displayed by the customer browser when the customer  
35 information terminal acquires the content information from the Web server via the  
36 collaboration server;

37 (r) embedding a customer side script for acquiring changed page information which  
38 includes a URL of a page including the changed content information, a URL of a parent page  
39 of the page including changed content information, a number of child pages of the parent page  
40 and a position of the page including the changed content information relative to the parent  
41 page;

42 (s) transmitting the changed page information to the collaboration server, checking  
43 whether or not the changed page information transmitted corresponds to a page that is currently  
44 displayed by the customer browser in response to acquisition of the changed page information  
45 transmitted from the agent, and embedding a tree manager for instructing the customer browser  
46 to display a page corresponding to the changed page information transmitted when the changed  
47 page information from the agent does not correspond to the currently displayed page;

48 (t) transmitting the changed page information to the collaboration server in  
49 response to detection by the second customer applet of the content information displayed by  
50 the customer browser;

51 (u) transmitting the changed page information to the agent information terminal by  
52 the collaboration server;

53 (v) causing the agent information terminal to determine whether or not a page that  
54 is currently display by an agent browser corresponds to the changed page information; and

55 (w) loading a page corresponding to the changed page information on the agent  
56 browser when the agent browser has decided that the currently displayed page does not  
57 correspond to the changed page information.

1 2. A content information acquisition method for allowing a second information terminal to  
2 acquire same information as content information acquired from a Web server by a first  
3 information terminal having a customer browser installed therein which displays the content  
4 information, comprising the steps of:

5 (a) interconnecting the first information terminal with a collaboration server for  
6 communication;

7 (b) interconnecting the second information terminal with the collaboration server  
8 for communication;

9 (c) embedding a client controller for transmitting changed content specifying  
10 information to the collaboration server when the first information terminal acquires new  
11 content information from the Web server via the collaboration server;

12 (d) transmitting the changed content specifying information to the collaboration  
13 server when the first information terminal acquires the new content information from the Web  
14 server via the collaboration server;

15 (e) causing the collaboration server to transmit the changed content specifying  
16 information to the second information terminal; and

17 (f) causing the second information terminal to acquire the changed content  
18 specifying information.

1 3. A content information acquisition method for allowing a second information terminal to  
2 acquire same information as content information acquired from a Web server by a first  
3 information terminal having a customer browser installed therein which displays the content  
4 information, comprising the steps of:

5 (a) embedding a client controller for transmitting changed content specifying  
6 information to a collaboration server and transmitting the client controller to the first  
7 information terminal, when the first information terminal connected to the collaboration server  
8 acquires a new content information via the collaboration server;

9 (b) causing the collaboration server to receive the changed content specifying  
10 information transmitted by the client controller of the first information terminal; and

11 (c) transmitting the changed content specifying information to the second

information terminal in order to enable the second information terminal connected to the collaboration server to acquire the content information.

4. A software product for supporting a second information terminal in acquiring the same information as content information acquired by a first information terminal from a Web server, the first information terminal having a first browser installed therein which displays the content information, the software product comprising:

(a) a program code for instructing the collaboration server to embed a client controller which transmits changed contents specifying information to the collaboration server, when the first information terminal connected to the collaboration server acquires new content information from the Web server via the collaboration server; and

(b) a program code for instructing the collaboration server to transfer the changed contents specifying information transmitted from the first information terminal to the second information terminal.

5. A software product for supporting an agent information terminal in acquiring the same information as content information acquired by a customer information terminal from a Web server, the customer information terminal having a customer browser installed therein which displays the content information, the software product comprising:

(a) a program code for instructing the collaboration server to generate a user access identifier which uniquely identifies an agent information terminal interconnected to a

7 collaboration server;

8 (b) in the agent information terminal, an agent applet for generating an agent  
9 control window through which personal information is input and which transmits the personal  
10 information from the agent information terminal to the collaboration server, and transmitting  
11 a log-on request including a user ID of an agent from the agent information terminal to the  
12 collaboration server, in response to a log-on instruction operation by the agent;

13 (c) a program code for instructing the collaboration server to generate a user access  
14 identifier which uniquely identifies a customer information terminal interconnected to the  
15 collaboration server;

16 (d) in the customer information terminal, a first customer applet for generating a  
17 customer control window through which personal information is input and which transmits the  
18 personal information from the customer information terminal to the collaboration server, and  
19 transmitting a log-on request including the personal information of a customer and query type  
20 information from the customer information terminal to the collaboration server, in response  
21 to a log-on instruction operation by the customer;

22 (e) a program code for instructing the collaboration server to assign an agent  
23 corresponding to the query type information to the customer;

24 (f) a program code for instructing the collaboration server to notify the agent  
25 information terminal of a start of a session;

(g) a program code for instructing the collaboration server to notify the customer information terminal of the start of the session;

(h) a program code for instructing the collaboration server to embed, in content information, a second customer applet for detecting a change in content information displayed by the customer browser when the customer information terminal acquires the content information from the Web server via the collaboration server;

(i) a program code for instructing the collaboration server to embed a customer side script for acquiring changed page information including a URL of a page including the changed content information, a URL of a parent page of the page including the changed content information, the number of child pages of the parent page and a position of the page including the changed content information relative to the parent page;

(j) a program code for instructing the collaboration manager to transmit the changed page information to the collaboration server, to check whether or not the changed page information transmitted from the agent corresponds to a page that is currently displayed by the customer browser in response to acquisition of the changed page information transmitted from the agent, and to embed a tree manager which instructs the customer browser to display a page corresponding to the changed page information transmitted from the agent when the changed page information transmitted does not correspond to the currently displayed page; and

(k) a program code for instructing the collaboration server to transmit the changed page information transmitted from the customer information terminal to the agent information



terminal, in response to detection by the second customer applet of a change in content information displayed by the customer browser.

6. A collaboration system which supports an agent information terminal in acquiring the same information as content information acquired from a Web server by a customer information terminal which has a customer browser installed therein which displays the content information, comprising:

(a) a customer information terminal having a customer browser installed therein;

(b) an agent information terminal having an agent browser installed therein;

(c) an HTTP bridge for supporting an interconnection between the agent information terminal and the customer information terminal;

(d) a step for generating a user access identifier which uniquely identifies the agent browser and the customer browser;

(e) an agent applet for generating from the collaboration server an agent control window through which personal information is input and which transmits the personal information from the agent information terminal to the collaboration server, and transmitting a log-on request including a user ID of an agent from the agent information terminal to the collaboration server, in response to a log-on instruction operation by the agent;

(f) a first customer applet for generating from the collaboration server a customer

control window through which personal information is input and which transmits the personal information from the customer information terminal to the collaboration server, and transmitting a log-on request including the personal information of a customer and query type information from the customer information terminal to the collaboration server, in response to a log-on instruction operation by the customer;

(g) a call manager for assigning an agent corresponding to the query type information to the customer;

(h) a cache manager for embedding in the content information (1) a second customer applet which detects a change in content information displayed by the customer browser, (2) a customer side script which acquires changed page information including a URL of a page including the changed content information, a URL of a parent page of the page including the changed content information, the number of child pages of the parent page and a position of the page including the changed content information relative to the parent page, (3) a tree manager which transmits the changed page information to the collaboration server, checks whether or not the changed page information transmitted from the agent corresponds to a page that is currently displayed by the customer browser in response to acquisition of the changed page information transmitted from the agent, and instructs the customer browser to display a page corresponding to the changed page information transmitted from the agent when the customer information terminal acquires the content information from the Web server via the collaboration serve; and

(i) a session manager for recording a set of user access identifiers of the agent and

85 the customer, both of which perform a collaboration, and transmits the changed page  
86 information transmitted from the customer information terminal to the agent information  
87 terminal, in response to detection by the second customer applet of the content information  
88 displayed by the customer browser.

1 7. A collaboration system which supports a second information terminal in acquiring the same  
2 information as content information acquired from a Web server by a first information terminal  
3 having a first browser installed therein which displays the content information, comprising:

4 (a) a cache manager for embedding a client controller which transmits changed  
5 contents specifying information to the collaboration server, when the first information terminal  
6 connected to the collaboration server acquires new content information from the Web server  
7 via the collaboration server; and

8 (b) a session manager for transmitting the changed contents specifying information  
9 transmitted from the first information terminal to the second information terminal in response  
10 to detection of a change in the content information by an applet, the content information being  
11 displayed by the first browser